

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Group Art Unit: 1793	:	
In re application of:	:	STARCH BINDER COMPOSITIONS,
Bailey et al.	:	METHODS OF MAKING THE SAME
Application No.: 10/820,972	:	AND PRODUCTS FORMED
Filing Date: April 8, 2004	:	THEREFROM

ARGUMENTS AND REMARKS FOR PRE-APPEAL BRIEF CONFERENCE

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Sir:

In response to the Final Office Action mailed from the U.S. Patent and Trademark Office on October 29, 2007 ("Final Office Action"), Applicant requests a Pre-Appeal Brief Conference in accordance with the guidelines in the "New Pre-Appeal Brief Conference Pilot Program" announcement, which appeared in the July 12, 2005 issue of the *Official Gazette*. In accordance with those guidelines, Arguments for the conference are presented herein. The issues addressed herein are ripe for appeal in accordance with 37 C.F.R. § 41.31(a)(1), the claims having been subject to at least two rejections.

Filed concurrently herewith are a Pre-Appeal Brief Request for Review (form PTO/SB/33), a Notice of Appeal, and the fee under 37 C.F.R. § 41.20(b)(1). Any deficiency or overpayment may be charged or credited, respectively, to Deposit Account No. 11-1110.

ARGUMENTS

Applicants filed a response to a first Office Action, including amendments, on September 4, 2007, resulting in the Final Office Action. In the Final Office Action, the Examiner maintained the rejection under 35 U.S.C. § 102(b) and/or 35 U.S.C. § 103(a) in view of U.S. Patent No. 5,766,366 to Ferguson et al. ("Ferguson"). Newly added claims 46-48 were rejected as being anticipated by or obvious in view of Ferguson. Applicants request withdrawal of the rejections of the claims under 35 U.S.C. § 102(b) and 103(a) as being obvious over Ferguson for at least the reasons that there is no suggestion or motivation to modify or combine the teachings of the references and that the cited reference fails to teach or suggest, either expressly or inherently, each and every element of the claims.

Applicant's Invention

Claim 1 recites an acid modified dry-milled starch composition comprising a viscosity profile, wherein at a 14.5% solids concentration, a starting temperature of 30°C, and a heating rate increase of 7.5°C/min, the composition at a time 0 through gelatinization undergoes a viscosity increase to a maximum value in the range of between 600 and 1600 BU torque at a time in the range of between 6.5 to 7.2 minutes, followed by a decrease in viscosity to a value in the range of 240 to 640 BU torque at a time of 8.4 minutes, based on a Brabender micro visco amylograph. **Claim 10** recites an acid modified dry-milled starch composition having a protein content of a cereal flour that undergoes a velocity increase under similar conditions to claim 1, followed by a 40 percent decrease in viscosity at a time of 8.4 minutes. **Claim 18** recites an acid modified dry milled starch composition that, under conditions similar to claim 1, undergoes a viscosity increase to a maximum value in the range of between 600 and 1600 BU torque at a time in the range of between 6.5 to 7.2 minutes, followed by a decrease in viscosity and a subsequent increase in viscosity at the end of a final holding period to a value that is substantially the same as the maximum value, based on a Brabender micro visco amylograph. **Claim 26** recites an acid modified dry-milled flour composition, the composition formed by the process comprising: dry-milling a grain, thus forming a flour; combining an acid component and the flour to form a mixture; and heating the mixture to a temperature of 85°C or less for a sufficient time effective to obtain the acid modified dry-milled flour composition.

A. Rejection of Claims 1-4, 10-12, and 18-23 under 35 U.S.C. § 102(b)

Claims 1-4, 10-12, and 18-23 stand rejected under 35 U.S.C. § 102(b) as assertedly being anticipated by Ferguson. However, Ferguson fails to teach, either expressly or inherently, each and every element of the claims.

Independent claims 1, 10 and 18 are set forth above. The Ferguson reference discloses a dry thinned starch and continuous processes for producing dry thinned starches and the compositions and products thereof. The dry thinned starches are produced by continuously feeding a mixture of a base starch and a chemical which hydrolyses the glycosidic linkage of starch to a plug flow reactor, passing the mixture through the reactor, recovering the mixture, and neutralizing the mixture. As set forth throughout the specification, such as in col. 3, lines 15-60, the Ferguson process is directed to an acid modified starch, obtained from a wet milling process.

It is acknowledged at col. 2, lines 7-8 that Ferguson teaches that his process can be used for any type of starch to be thinned. It is also noted that Ferguson does not teach a process using flour.

Unlike Ferguson who teaches an acid modified starch obtained from a wet milling process, claims 1-4 and claims 18-23 of the present disclosure recite an acid modified dry-milled starch. As clearly set forth in the present specification at paragraph [0021], the term “dry-milled starch” is defined as “the flour product of a processed raw grain in the substantial absence of liquid, as compared to the pure starch of a wet milled cereal grain.” (emphasis added) *Inter alia*, paragraph [0021] clearly distinguishes a dry-milled starch (i.e. flour product), as recited in the present claims, from a base starch produced by a wet milling process, such as the composition and process taught by Ferguson. One of ordinary skill in the art clearly recognizes the difference between an acid modified starch such as taught by Ferguson, and a dry-milled flour as recited in claims 1-4 and 18-23. This distinction is clearly provided in the present specification, such as at paragraph [0021]. In addition, conventional definitions of flour can be found, for example, in 21 CFR § 137.105, which characterizes flour as having specific processing methods and component ratios of, for example, ash, protein, and moisture content. In contrast, wet milled starch, as taught by Ferguson, is not a dry milled flour product, such as the dry milled corn and milo products, contemplated by the present disclosure.

Like independent claims 1 and 18, claim 10 recites an acid modified dry-milled starch. In addition, claim 10 further recites that the dry-milled starch has a protein content of a cereal flour, which has been added, in part, to further define the starch/flour distinction. It is submitted that in addition to the teachings of the present specification, 21 CFR § 137, for example, provides clear guidance on cereal flours and what is meant by this term. In this manner, claim 10 further distinguishes an acid modified starch obtained from a wet milling process, as taught by Ferguson, and a dry-milled flour, as recited in claim 10 and the claims that dependent therefrom.

For at least these reasons, Applicants respectfully request withdrawal of the rejection under 35 U.S.C. § 102(b) in view of Ferguson.

B. Rejection of Claims 5-7, 13-15, and 26-33 under 35 U.S.C. § 102(b)

For at least the reasons set forth in *Section A*, claims 5-7, that depend from claim 1 and claims 13-15, that depend from claim 10 are clearly distinguishable from the teachings of Ferguson. Furthermore, claims 26-33 recite an acid modified dry milled flour composition obtained from a process that includes dry-milling a grain, thus forming a flour. Accordingly, for

at least the reason that Ferguson clearly teaches an acid modified starch obtained from a wet milling process, and not flour, claims 26-33 are distinguishable from the teachings of Ferguson.

Accordingly, Applicants respectfully request withdrawal of the rejection of claims 5-7, 13-15, and 26-33 under 35 U.S.C. § 102(b) in view of Ferguson.

C. Rejection of Claims 5-7, 13-15, and 26-33 under 35 U.S.C. § 103(a)

Claims 5-7, 13-15, and 26-33 stand rejected under 35 U.S.C. § 103(a) for assertedly being obvious over Ferguson. Applicants respectfully disagree, and assert that the PTO has failed to establish a *prima facie* case of obviousness.

As noted by the Examiner, Ferguson discloses a process of making an acid modified starch. The Examiner asserts that because the acid modified starch of Ferguson is made by a process substantially identical to the claimed process, it is reasonably expected that the modified starch of Ferguson is similar to that of the instant claims. Applicants respectfully disagree.

As set forth in *Section A*, herein, it is respectfully submitted that the wet milling starch process taught by Ferguson is clearly different from the acid modified dry-milling flour process recited in claims 5-7, 13-15, and 26-33. As discussed above, unlike Ferguson who teaches an acid modified starch obtained from a wet milling process, present claims 5-7, 13-15, and 26-33 recite an acid modified dry-milled starch (i.e. flour). Indeed, as set forth in paragraph [0021], the dry-milled starch as recited in the present claims is clearly defined and distinguished from a base starch, such as the starch taught by Ferguson. It is submitted that one of ordinary skill in the art would recognize that the process of obtaining the recited dry-milled starch (i.e. flour) is not substantially identical to the starch process employed by Ferguson, as asserted by the Examiner.

To establish *prima facie* obviousness of a claimed invention, all the claim limitations must be taught or suggested by the combination of prior art. In addition, a reasonable expectation of success is required to support a *prima facie* case of obviousness. *In re Clinton*, 527 F.2d 1226, 1228, 188 USPQ 365, 367 (CCPA 1976). Applicants respectfully submit that the teaching of Ferguson cannot form the basis for an obviousness rejection for at least the reasons that: 1) Ferguson fails to teach all the recited elements of claims 5-7, 13-15, and 26-33; and 2) one of ordinary skill in the art would not have a reasonable expectation of success of producing an acid modified dry-milled flour, as set forth in claims 5-7, 13-15, and 26-33. This is so because the teachings of Ferguson are directed to an acid modified starch formed by a wet milling process. As set forth in paragraph [0021] of the present disclosure, the claimed “dry-

milled starch” (i.e. flour) is clearly distinguished from pure starch of a wet milled process.

Accordingly, Ferguson does not teach all the claimed elements of claims 5-7, 13-25, and 26-33.

In addition, because flour and starch are clearly different compositions, the teachings of Ferguson provide no reasonable expectation of achieving the advantageous viscosity profile (claims 5-7 and 13-15) or the dry-milled flour composition or related process (claims 26-33) set forth in the claims of the present disclosure. It is respectfully submitted that any assertion to the contrary would be hindsight reconstruction, and/or would simply amount to an unsupported belief. *In re Fine*, 837 F.2d 1071, 5 USPQ 1596 (Fed.Cir. 1988); *In re Geiger*, 815 F.2d 686,688, 2 USPQ 1276, 1278 (Fed.Cir. 1987).

Accordingly, for the reasons set forth herein, the teaching of Ferguson does not establish a *prima facie* case for obviousness. Accordingly, withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

D. Claims 46-50

Claims 46-50 were added in the previous office action to further recited embodiments of the present disclosure employing specific flour compositions, specific fat contents, or specific levels of protein. The Examiner has failed to identify the disposition of claims 49 and 50, and for at least this reason, it is requested that the prosecution of all claims be reopened.

As discussed above, Ferguson teaches starch processing, and fails to teach or suggest the compositions recited in claims 46-50. Indeed, following a detailed review of the reference, Ferguson does not, once, teach or suggest “flour,” “fat,” or “protein” compositions.

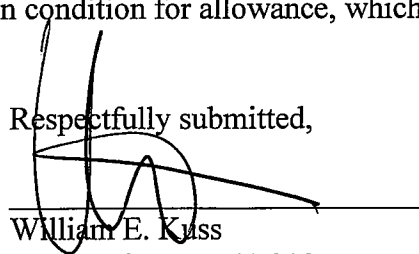
Accordingly, for the reasons set forth herein, claims 46-50 are patentable over the teachings of Ferguson. the teaching of Ferguson does not establish a *prima facie* case for obviousness. Accordingly, withdrawal of the rejection under 35 U.S.C. § 103(a) is respectfully requested.

CONCLUSION

Applicant submits that all of the claims are in condition for allowance, which action is respectfully requested.

Jan 29, 2008
Date

Respectfully submitted,


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